

### **REMARKS**

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

New claims 22-24 have been added.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

The disclosure of Applicant's application provides support for the amendments to the claims. For example, at least Figure 2 and its related text provide support for new claims 22 and 23.

After amending the claims as set forth above, claims 1-24 are now pending in this application. Claims 1-13 have been withdrawn from consideration.

#### **Rejections under 35 U.S.C. § 103**

Claims 14-17 and 21 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,046,268 to Ochoa *et al.* (hereafter "Ochoa") in view of JP 09-274909 to Miyazaki *et al.* (hereafter "Miyazaki"). This rejection is respectfully traversed.

Ochoa discloses an electrode that is fabricated by providing a "fines mixture" that includes active material having a very fine particle size and by providing a second slurry or "non-fines mixture," of active material having a conventional particle size, with the second slurry being coated onto a foil previously coated with the fines mixture. See Ochoa at col. 2, lines 48-65.

Ochoa discusses the interface of an electrode joint with a substrate and states that bonding of electrode particles to a substrate surface could be improved by increasing the particle surface area at the interface of the electrode layer with the substrate because, for one

reason, the strength of an adhesive joint is proportional to the surface area responsible for the joint and particles would increase the surface area. See Ochoa at col. 3, line 24, to col. 4, line 27. Ochoa discloses materials for the active materials in col. 5, lines 4-21.

The Office argues on pages 2-3 of the Office Action that Ochoa provides a secondary battery electrode comprising, among other things, a current collector and an electrode layer formed on the current collector and including a plurality of kinds of active materials that are different in electrical characteristic, as recited in claim 14. Claims 15-17 depend from claim 14.

However, the fines mixture and the non-fines mixture of Ochoa do not provide a secondary battery comprising, among other things, an electrode layer formed on the current collector and including a plurality of kinds of active materials, different in electrical characteristic, the electrode layer being structured such that graphics associated with the plurality of kinds of active materials, respectively, are located on discrete areas which are in contact with a surface of the current collector, as recited in claim 14. Applicant's invention advantageously provides a secondary battery that can have arbitrary charging and discharging characteristics.

Instead, the process of Ochoa first coats the "fines mixture" onto a substrate current collector foil and then coats the second slurry, or "non-fines mixture," of active material having a conventional particle size onto the previously coated fines mixture by a doctor blade. See Ochoa at col. 2, lines 48-65. In fact, Ochoa states "[t]he essence of our invention is in distributing fines comprised of electrode active material at the interface between the electrode coating and the substrate" (emphasis added). See Ochoa at col. 4, lines 40-42.

In other words, the process of Ochoa provides two layers: a first, "fines mixture," and a second, "non-fines mixture" layered on top of the "fines mixture."

As a result, the process of Ochoa does not provide an electrode layer including a plurality of kinds of active materials located on discrete areas which are in contact with a surface of the current collector, as recited in claim 14, because only the "fines mixture" of the electrode layer of Ochoa would be in contact with a current collector because it is first

sprayed onto the substrate current collector foil. The second, “non-fines mixture” of Ochoa would not be in contact with a surface of the substrate current collector foil of Ochoa because the “non-fines mixture” is coated on top of the “fines mixture.” Thus, Ochoa does not disclose or suggest the electrode layer recited in claim 14.

Nor does Ochoa disclose or suggest such an electrode layer that is structured such that graphics associated with the plurality of kinds of active materials, respectively, are located on discrete areas of the current collector, as recited in claim 14. Ochoa is silent in regard to these features.

Miyazaki discloses a process of coating a current collector 5 by supplying a coating liquid from a liquid container 6 that is linearly moved in an X direction to provide a coating line. See abstract of Miyazaki. The current collector 5 is then translated in the Y direction and the coating of the coating liquid is repeated in the opposite X direction to form a second coating line. See abstract of Miyazaki.

However, Miyazaki does not remedy the deficiencies of Ochoa because Miyazaki also does not disclose or suggest a secondary battery electrode comprising, among other things, a current collector and an electrode layer formed on the current collector and including a plurality of kinds of active materials, different in electrical characteristic, the electrode layer being structured such that graphics associated with the plurality of kinds of active materials, respectively, are located on discrete areas which are in contact with a surface of the current collector, as recited in claim 14. Miyazaki is silent in regard to these features.

For at least the reasons discussed above, the combination of Ochoa and Miyazaki does not render claims 14-17 to be unpatentable because the combination of Ochoa and Miyazaki does not disclose or suggest all of the features of claim 14. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 18-20 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ochoa and Miyazaki in view of U.S. Pub. No. 2003/0091896 to Watanabe *et al.* (hereafter “Watanabe”). This rejection is respectfully traversed. Watanabe fails to remedy the deficiencies of Ochoa and Miyazaki discussed above in regard to independent claim 14,

from which claims 18-20 depend. Reconsideration and withdrawal of this rejection is respectfully requested.

### **New Claims**

New claims 22 and 23 have been added. Claims 22 and 23 depend from independent claim 14 and are allowable over the prior art for at least the reasons discussed above and for their respective additional recitations.

New claim 24 recites includes a secondary battery electrode comprising a current collector and an electrode layer formed on the current collector and including a plurality of kinds of active materials, different in electrical characteristic, the electrode layer being structured such that graphics associated with the plurality of kinds of active materials, respectively, are located on discrete areas of the current collector, wherein the discrete areas include a first discrete area formed of one kind of active material and a second discrete area formed of another kind of active material, wherein the first discrete area is in contact with a surface of the current collector and the second discrete area is in contact with the surface of the current collector.

For at least the reasons discussed above, the references relied upon by the Office do not disclose or suggest a first discrete area formed of one kind of active material and a second discrete area formed of another kind of active material, wherein the first discrete area is in contact with a surface of the current collector and the second discrete area is in contact with the surface of the current collector, as recited in claim 24.

### **Conclusion**

Applicant submits that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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